

Abstract

Disclosed is an improved system and method to selectively promote tissue in-growth on, or adjacent to, an implantable medical device. In one embodiment, at least one surface of the housing of a medical device is in contact with a first portion of a porous PTFE having a pore size adapted to prevent substantially all tissue in-growth. This first portion, or layer, of porous PTFE material is further in contact at predetermined locations with an additional porous PTFE layer having a pore size adapted to selectively promote tissue in-growth only at the predetermined locations. Each of the PTFE layers may be formed of porous PTFE tubing or tape. Alternatively, the two layers may comprise a single composite structure that has a more porous material exposed on a first surface, and a less porous, more dense, material on a second surface. Another embodiment of the invention involves forming the layers of PTFE into a removable member that is adjacent to at least one surface of the implantable medical device. The removable member may take the form of a sleeve that surrounds a portion of the medical device and is adapted to remain in the body during an extraction process. For example, during the removal of a lead, the sleeve remains within the body and is capable of receiving a replacement lead, making it unnecessary to disturb tissue in-growth attached to the sleeve.